GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: February 16, 2005, 16:08:55 ; Search time 42.0491 Seconds
(without alignments)
2014.322 Million cell updates/sec

Title: US-10-003-356-2
Perfect score: 1138
Sequence: 1 MFERRKEQDEGPGIHEFLAF.....RVIASDKIQSKAVVKRIQHF 219

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1138	100.0	219	5	AAE24048	Aae24048 Human V2
2	1138	100.0	755	7	ADC85997	Adc85997 Human GPC
3	1138	100.0	927	5	AAE24050	Aae24050 Chimeric
4	740	65.0	912	8	ADI41024	Adi41024 Mouse phe
5	707	62.1	720	7	ADC12754	Adc12754 Human GPC
6	362	31.8	940	7	ADJ93195	Adj93195 Fugu extr
7	362	31.8	940	8	ADI40967	Adi40967 Fugu calc
8	362	31.8	940	8	ADI41016	Adi41016 Fugu calc
9	357	31.4	1059	4	AAU00508	Aau00508 Chicken c
10	354	31.1	850	7	ADH10927	Adh10927 Atlantic
11	354	31.1	941	7	ADH10923	Adh10923 Atlantic
12	354	31.1	941	7	ADH10925	Adh10925 Atlantic
13	354	31.1	941	7	ADH10929	Adh10929 Atlantic
14	353	31.0	612	2	AAY49105	Aay49105 Human CaR
15	353	31.0	612	5	AAO15072	Aao15072 Human CaR
16	353	31.0	901	3	AAY45001	Aay45001 Human cal
17	353	31.0	917	2	AAY49126	Aay49126 Chimeric
18	353	31.0	917	5	AAO15092	Aao15092 Chimeric
19	353	31.0	974	3	AAY45000	Aay45000 Human cal
20	353	31.0	975	4	AAB47218	Aab47218 Chimeric
21	353	31.0	1001	3	AAY44999	Aay44999 Human cal
22	353	31.0	1026	2	AAW32059	Aaw32059 Dogfish s
23	353	31.0	1027	5	AAU76004	Aau76004 Shark kid
24	353	31.0	1027	5	ABB78761	Abb78761 Dogfish s
25	353	31.0	1027	7	ADH10917	Adh10917 Shark pol
26	353	31.0	1027	7	ABW02706	Abw02706 Dogfish s
27	353	31.0	1027	8	ADI19970	Adi19970 Dogfish s
28	353	31.0	1078	2	AAW11889	Aaw11889 Parathyro
29	353	31.0	1078	2	AAW54846	Aaw54846 Human par
30	353	31.0	1078	2	AAW38274	Aaw38274 Human par
31	353	31.0	1078	2	AAY28840	Aay28840 Human cal
32	353	31.0	1078	2	AAY41780	Aay41780 Human par
33	353	31.0	1078	2	AAW89565	Aaw89565 Human par
34	353	31.0	1078	3	AAY51827	Aay51827 Human cal
35	353	31.0	1078	3	AAY70325	Aay70325 Human wil
36	353	31.0	1078	4	AAU02195	Aau02195 Cynomolgo
37	353	31.0	1078	4	AAB74391	Aab74391 Protein e
38	353	31.0	1078	5	AAB47822	Aab47822 HuCaR4.0.
39	353	31.0	1078	6	ABP81817	Abp81817 Human cal
40	353	31.0	1078	6	ABG72193	Abg72193 Human cal
41	353	31.0	1078	7	ADD48571	Add48571 Human Pro
42	353	31.0	1078	7	ADE62143	Ade62143 Human Pro
43	353	31.0	1078	7	ADE62147	Ade62147 Human Pro
44	353	31.0	1078	7	ADH10955	Adh10955 Human par
45	353	31.0	1078	7	ADJ68365	Adj68365 Human hea

ALIGNMENTS

RESULT 1
AAE24048
ID AAE24048 standard; protein; 219 AA.
XX
AC AAE24048;
XX
DT 04-OCT-2002 (first entry)
XX
DE Human V2 vomeronasal receptor (Zvn2R1) N-terminal protein.
XX
KW Human; V2 vomeronasal receptor; Zvn2R1; educational tool; gene therapy;
KW receptor.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1. .29
FT /label= Signal_peptide
FT Protein 30. .219
FT /note= "Mature human Zvn2R1 N-terminal protein"
XX
PN WO200242464-A2.
XX
PD 30-MAY-2002.
XX
PF 15-NOV-2001; 2001WO-US046034.
XX
PR 21-NOV-2000; 2000US-0252373P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Lok S, Holloway JL;
XX
DR WPI; 2002-479953/51.
DR N-PSDB; AAD39168.
XX
PT Novel isolated human V2 vomeronasal receptor, termed Zvn2R1, for
PT identifying presence of Zvn2R1 ligand in sample, as educational tools in
PT laboratory practicum kits for courses related to genetics and molecular
PT biology.
XX
PS Claim 1; Page 81; 98pp; English.
XX
CC The invention relates to an isolated human V2 vomeronasal receptor termed
CC Zvn2R1. The Zvn2R1 nucleic acid is useful for detecting the expression of
CC Zvn2R1 gene in a biological sample, to determine if a subject's
CC chromosomes contain a mutation in the Zvn2R1 gene, and for therapeutic
CC purposes. Zvn2R1 is useful as an aid to teach preparation of antibodies,

```
CC   identifying proteins by Western blotting, protein purification,
CC   determining the weight of expressed Zvn2R1 polypeptides as a ratio to
CC   total protein expressed, identifying peptide cleavage sites, coupling
CC   amino and carboxyl terminal tags, amino acid sequence analysis,
CC   monitoring biological activities of both the native and tagged protein in
CC   vitro and in vivo and to teach analytical skills such as mass
CC   spectrometry, circular dichroism to determine conformation, especially of
CC   the four alpha helices X-ray crystallography to determine the three-
CC   dimensional structure in atomic detail, and nuclear magnetic resonance
CC   spectroscopy to reveal the structure of proteins in solution. Zvn2R1 is
CC   useful as educational tools in laboratory practicum kits for courses
CC   related to genetics and molecular biology, protein chemistry, antibody
CC   production and analysis, and as standards or as unknowns for testing
CC   purposes. The invention is useful as a teaching aid to instruct students
CC   how to prepare affinity chromatography columns to purify Zvn2R1, and for
CC   cloning and sequencing the polynucleotide that encodes an antibody and
CC   thus as a practicum for teaching a student how to design humanised
CC   antibodies. The invention is useful in gene therapy. The present sequence
CC   is human Zvn2R1 N-terminal protein
XX
SQ   Sequence 219 AA;

  Query Match             100.0%;  Score 1138;  DB 5;  Length 219;
  Best Local Similarity   100.0%;  Pred. No. 3.5e-123;
  Matches  219;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MFERRKEQDEGPGIHEFLAFLWAELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MFERRKEQDEGPGIHEFLAFLWAELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60

Qy         61 IDSRTIPANESILEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 IDSRTIPANESILEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120

Qy        121 CFTISKSVEAVLVFLTGQEENRPNFRNSTGAFPAGIVGAGGSFLSVPASRILGLYYLPQV 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CFTISKSVEAVLVFLTGQEENRPNFRNSTGAFPAGIVGAGGSFLSVPASRILGLYYLPQV 180

Qy        181 GYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
              |||||||||||||||||||||||||||||||||||||||
Db        181 GYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219


RESULT 2
ADC85997
ID   ADC85997 standard; protein; 755 AA.
XX
AC   ADC85997;
XX
DT   01-JAN-2004  (first entry)
XX
DE   Human GPCR protein SEQ ID NO:450.
XX
KW   human; GPCR; guanosine triphosphate-binding protein coupled receptor;
KW   gene therapy.
XX
OS   Homo sapiens.
XX
PN   EP1270724-A2.
XX
PD   02-JAN-2003.
XX
PF   18-JUN-2002; 2002EP-00013517.
XX
PR   18-JUN-2001; 2001JP-00246789.
XX
PA   (NAAD-) NAT INST ADVANCED IND SCI & TECHNOLOGY.
PA   (ADSC-) CENT ADVANCED SCI & TECHNOLOGY INCUBATIO.
XX
PI   Suwa M,  Asai K,  Akiyama Y,  Aburatani H;
XX
DR   WPI; 2003-315783/31.
DR   N-PSDB; ADC85996.
XX
PT   New polynucleotide, useful for preparing a composition for treating a
PT   patient in need of increased or suppressed activity or expression of the
PT   guanosine triphosphate-binding protein coupled receptor.
XX
PS   Claim 2; SEQ ID NO 450; 28pp; English.
XX
CC   The invention relates to a novel polynucleotide encoding a guanosine
CC   triphosphate-binding protein coupled receptor (GPCR). A polynucleotide of
CC   the invention may have a use in gene therapy. The polynucleotide and
CC   polypeptide are useful for preparing a composition for treating a patient
CC   in need of increased or suppressed activity or expression of the
CC   guanosine triphosphate-binding protein coupled receptor. The protein
CC   sequences shown in ADC85549-ADC87617 represent GPCR's of the invention.
XX
SQ   Sequence 755 AA;

  Query Match             100.0%;  Score 1138;  DB 7;  Length 755;
  Best Local Similarity   100.0%;  Pred. No. 2.2e-122;
  Matches  219;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MFERRKEQDEGPGIHEFLAFLWAELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MFERRKEQDEGPGIHEFLAFLWAELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60

Qy         61 IDSRTIPANESILEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 IDSRTIPANESILEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120

Qy        121 CFTISKSVEAVLVFLTGQEENRPNFRNSTGAFPAGIVGAGGSFLSVPASRILGLYYLPQV 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CFTISKSVEAVLVFLTGQEENRPNFRNSTGAFPAGIVGAGGSFLSVPASRILGLYYLPQV 180

Qy        181 GYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
              |||||||||||||||||||||||||||||||||||||||
Db        181 GYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219


RESULT 3
AAE24050
ID   AAE24050 standard; protein; 927 AA.
XX
AC   AAE24050;
XX
DT   29-AUG-2003  (revised)
DT   04-OCT-2002  (first entry)
XX
DE   Chimeric receptor DNA protein.
XX
KW   Human; V2 vomeronasal receptor; Zvn2R1; educational tool; gene therapy;
KW   receptor; murine; chimeric.
XX
OS   Homo sapiens.
OS   Mus sp.
OS   Chimeric.
XX
FH   Key             Location/Qualifiers
FT   Domain          1. .621
FT                   /note= "Extracellular domain"
FT   Peptide         1. .29
FT                   /label= Signal_peptide
FT   Protein         30. .927
FT                   /note= "Mature chimeric receptor protein"
FT   Domain          30. .610
FT                   /note= "Ligand binding domain"
FT   Domain          622. .647
FT                   /note= "Transmembrane domain-1"
FT   Domain          648. .660
FT                   /note= "Intracellular domain"
FT   Domain          661. .681
FT                   /note= "Transmembrane domain-2"
FT   Domain          682. .692
FT                   /note= "Extracellular domain"
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FT   Domain          693. .717
FT                   /note= "Transmembrane domain-3"
FT   Domain          718. .735
FT                   /note= "Intracellular domain"
FT   Domain          736. .755
FT                   /note= "Transmembrane domain-4"
FT   Domain          756. .777
FT                   /note= "Extracellular domain"
FT   Domain          778. .802
FT                   /note= "Transmembrane domain-5"
FT   Domain          803. .815
FT                   /note= "Intracellular domain"
FT   Domain          816. .836
FT                   /note= "Transmembrane domain-6"
FT   Domain          837. .847
FT                   /note= "Extracellular domain"
FT   Domain          848. .872
FT                   /note= "Transmembrane domain-7"
FT   Domain          873. .927
FT                   /note= "Intracellular domain"
XX
PN   WO200242464-A2.
XX
PD   30-MAY-2002.
XX
PF   15-NOV-2001; 2001WO-US046034.
XX
PR   21-NOV-2000; 2000US-0252373P.
XX
PA   (ZYMO ) ZYMOGENETICS INC.
XX
PI   Lok S,  Holloway JL;
XX
DR   WPI; 2002-479953/51.
DR   N-PSDB; AAD39172.
XX
PT   Novel isolated human V2 vomeronasal receptor, termed Zvn2R1, for
PT   identifying presence of Zvn2R1 ligand in sample, as educational tools in
PT   laboratory practicum kits for courses related to genetics and molecular
PT   biology.
XX
PS   Claim 5; Page 93-96; 98pp; English.
XX
CC   The invention relates to an isolated human V2 vomeronasal receptor termed
CC   Zvn2R1. The Zvn2R1 nucleic acid is useful for detecting the expression of
CC   Zvn2R1 gene in a biological sample, to determine if a subject's
CC   chromosomes contain a mutation in the Zvn2R1 gene, and for therapeutic
CC   purposes. Zvn2R1 is useful as an aid to teach preparation of antibodies,
CC   identifying proteins by Western blotting, protein purification,
CC   determining the weight of expressed Zvn2R1 polypeptides as a ratio to
CC   total protein expressed, identifying peptide cleavage sites, coupling
CC   amino and carboxyl terminal tags, amino acid sequence analysis,
CC   monitoring biological activities of both the native and tagged protein in
CC   vitro and in vivo and to teach analytical skills such as mass
CC   spectrometry, circular dichroism to determine conformation, especially of
CC   the four alpha helices X-ray crystallography to determine the three-
CC   dimensional structure in atomic detail, and nuclear magnetic resonance
CC   spectroscopy to reveal the structure of proteins in solution. Zvn2R1 is
CC   useful as educational tools in laboratory practicum kits for courses
CC   related to genetics and molecular biology, protein chemistry, antibody
CC   production and analysis, and as standards or as unknowns for testing
CC   purposes. The invention is useful as a teaching aid to instruct students
CC   how to prepare affinity chromatography columns to purify Zvn2R1, and for
CC   cloning and sequencing the polynucleotide that encodes an antibody and
CC   thus as a practicum for teaching a student how to design humanised
CC   antibodies. The invention is useful in gene therapy. The present sequence
CC   is chimeric receptor protein. This chimeric sequence was designed by
CC   aligning human Zvn2R1 and murine tissue-type vomeronasal putative
CC   pheromone receptor (V2R2). (Updated on 29-AUG-2003 to standardise OS
CC   field)
XX
SQ   Sequence 927 AA;
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  Query Match           100.0%;  Score 1138;  DB 5;  Length 927;
  Best Local Similarity  100.0%;  Pred. No. 2.9e-122;
  Matches  219;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MFERRKEQDEGPGIHEFLAFLWAELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MFERRKEQDEGPGIHEFLAFLWAELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFP 60

Qy         61 IDSRTIPANESILEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 IDSRTIPANESILEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDT 120

Qy        121 CFTISKSVEAVLVFLTGQEENRPNFRNSTGAFPAGIVGAGGSFLSVPASRILGLYYLPQV 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CFTISKSVEAVLVFLTGQEENRPNFRNSTGAFPAGIVGAGGSFLSVPASRILGLYYLPQV 180

Qy        181 GYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
              |||||||||||||||||||||||||||||||||||||||
Db        181 GYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
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RESULT 4
ADI41024
ID   ADI41024 standard; protein; 912 AA.
XX
AC   ADI41024;
XX
DT   22-APR-2004  (first entry)
XX
DE   Mouse pheromone receptor V2R2.
XX
KW   Receptor; GPCR; G protein-coupled receptor; reproductive disorder;
KW   testicular disorder; vas deferens disorder; spermatogenesis; infertility;
KW   XX male; epididymitis; cryptorchidism; sperm transport disorder;
KW   testicular cancer; testicular germ cell tumour; male hormone disorder;
KW   premature puberty; Kallman syndrome; Cushing's syndrome; immune disorder;
KW   leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis;
KW   inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity;
KW   graft-versus-host disease; autoimmunity disorder;
KW   systemic lupus erythematosus; drug induced haemolytic anaemia;
KW   Sjogren's disease; T-cell maturation disorder;
KW   B-cell maturation disorder; vascular disorder; stroke; ischaemia;
KW   myocardial infarction; atherosclerosis; gastrointestinal disorder; ulcer;
KW   pulmonary disorder; brain disorder; endocrine disorder; cancer;
KW   gene therapy.
XX
OS   Mus musculus.
XX
PN   US2004018976-A1.
XX
PD   29-JAN-2004.
XX
PF   13-MAY-2003; 2003US-00436715.
XX
PR   14-MAY-2002; 2002US-0380336P.
XX
PA   (FEDE/) FEDER J N.
PA   (MINT/) MINTIER G.
PA   (RAMA/) RAMANATHAN C S.
XX
PI   Feder JN,  Mintier G,  Ramanathan CS;
XX
DR   WPI; 2004-122081/12.
XX
PT   New human G-protein coupled receptor polypeptide and polynucleotide,
PT   useful for diagnosing, preventing, treating or ameliorating a medical
PT   condition, e.g. reproductive disorder, immunodeficiency disease or
PT   testicular cancer.
XX
PS   Disclosure; SEQ ID NO 84; 290pp; English.
XX
CC   The invention relates to an isolated human G protein-coupled receptor
CC   polypeptide and its encoding polynucleotide, including the full length
```

CC proteins minus the start methionine (and the region of the polynucleotide
CC encoding this protein region). The proteins are designated HGPRBMY30-1,
CC HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY41-3,
CC HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are
CC expression vectors, host cells, antibodies, preventing (treating or
CC ameliorating) a medical condition comprising administering to a mammalian
CC subject the polypeptide or its modulator and diagnosing a pathological
CC condition or a susceptibility to a pathological condition in a subject
CC (comprising determining the presence or absence of a mutation in the
CC polynucleotide, or the presence or amount of expression of the
CC polypeptide in a biological sample and diagnosing a pathological
CC condition or a susceptibility to a pathological condition based on the
CC presence or absence of the mutation, or the presence or amount of
CC expression of the polypeptide). The human G-protein coupled receptor
CC polypeptide or polynucleotide can be used for diagnosing a pathological
CC condition or a susceptibility to a pathological condition in a subject,
CC and for preventing, treating or ameliorating a medical condition, such as
CC a disorder related to aberrant G-protein coupled receptor activity, a
CC disorder related to aberrant signal transduction, a reproductive disorder
CC ; a male reproductive disorder, a testicular disorder, a vas deferens
CC disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male,
CC epididymitis, genital warts, germinal cell aplasia, cryptorchidism,
CC varicocele, immotile cilia syndrome, viral orchitis, sperm transport
CC disorders, testicular cancer, choriocarcinoma, non-seminoma, seminoma,
CC testicular germ cell tumours, male hormone disorders, premature puberty,
CC incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune
CC disorder, a proliferative immune disorder, leukaemia, arthritis, asthma,
CC immunodeficiency diseases such as AIDS, rheumatoid arthritis,
CC granulomatous disease, inflammatory bowel disease, sepsis, acne,
CC neutropenia, neutrophilia, psoriasis, hypersensitivities, such as T-cell
CC mediated cytotoxicity, immune reactions to transplanted organs and
CC tissues, such as host-versus-graft and graft-versus-host diseases, or
CC autoimmunity disorders, such as autoimmune infertility, demyelination,
CC systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
CC disease, scleroderma, T-cell maturation disorders, B-cell maturation
CC disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
CC atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
CC irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
CC endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
CC related proliferative condition (many other diseases and disorders are
CC listed in the specification). The antibodies may be used to purify,
CC detect and target the G-protein coupled receptor polypeptides. The
CC polynucleotides are also useful in gene therapy. The present sequence
CC represents a species homologue of a novel GPCR of the invention.
XX
SQ Sequence 912 AA;

Query Match 65.0%; Score 740; DB 8; Length 912;
Best Local Similarity 69.7%; Pred. No. 4.9e-76;
Matches 145; Conservative 25; Mismatches 30; Indels 8; Gaps 2;

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Qy         17 FLAFLWAELGSEAKEEKEEERTCRLLGK-----CVDAENHSLVIGGLFPIDSRTIPANES 71
              ||||||| ||:   : | ||  |||: |      |||:|||||| ||||| || || :|:
Db         12 FLAFLWAVLGA---QNKTEEVQCRLMAKFNLSGYVDAKNHSLVIAGLFPIHSRIIPVDEA 68

Qy         72 ILEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAV 131
              |||| |  ||||||: ||||| ||| |||||:||||||| ||||||||:|:||||::|:
Db         69 ILEPVSPMCEGFNFRGFRWMKTMIHTIKEINERKDILPNHTLGYQIFDSCYTISKAMESS 128

Qy        132 LVFLTGQEENRPNFRNSTGAFPAGIVGAGGSFLSVPASRILGLYYLPQVGYTSTCVILSD 191
              ||||||||| :|||||||:  | :||:||| ||| |||||||||:|||||||:| ||||
Db        129 LVFLTGQEEPKPNFRNSTGSTLAALVGSGGSSLSVAASRILGLYYMPQVGYTSSCSILSD 188

Qy        192 KYQFPSYLRVIASDKIQSKAVVKRIQHF 219
              |:||||||||: || :||:|:|  |:||
Db        189 KFQFPSYLRVLPSDNLQSEAIVNLIKHF 216
```

RESULT 5
ADC12754
ID ADC12754 standard; protein; 720 AA.
XX
AC ADC12754;
XX
DT 18-DEC-2003 (first entry)
XX
DE Human GPCR protein, SEQ ID No 86.
XX
KW G protein-coupled receptor; GPCR; antibacterial; fungicide; protozoacide;
KW virucide; antirheumatic; antiarthritic; tranquiliser; antidiabetic;
KW osteopathic; nootropic; neuroprotective; anorectic; cardiant;
KW neuroleptic; cytostatic; antiparkinsonian; hypotensive; hypertensive;
KW antiulcer; antiallergic; anticonvulsant; analgesic; infection;
KW rheumatoid arthritis; chronic obstructive pulmonary diseases; COPD;
KW asthma; non-insulin dependent diabetes; obesity; osteoporosis;
KW Alzheimer's disease; age-related macular degeneration;
KW myocardial infarction; schizophrenia; osteoarthritis; cancer;
KW Parkinson's disease; congestive heart failure; hypotension; hypertension;
KW ulcer; allergy; benign prostatic hyperplasia; seizure disorder; anxiety;
KW obsessive compulsive disorder; Cushing's syndrome; hypopituitarism; pain;
KW human.
XX
OS Homo sapiens.
XX
PN WO2003000893-A2.
XX
PD 03-JAN-2003.
XX
PF 24-JUN-2002; 2002WO-IB002357.
XX
PR 26-JUN-2001; 2001US-0301095P.
PR 06-NOV-2001; 2001US-0333185P.
XX
PA (DECO-) DECODE GENETICS EHF.
XX
PI Martinez RMA, Sigurdsson GT;
XX
DR WPI; 2003-210155/20.
DR N-PSDB; ADC12753.
XX
PT New G protein-coupled receptor (GPCR) genes and polypeptides, useful for
PT diagnosing diseases associated with a GPCR, or in gene therapy for
PT treating e.g. obesity, osteoporosis, Alzheimer's, cancers or congestive
PT heart failure.
XX
PS Claim 10; SEQ ID NO 86; 253pp; English.
XX
CC The invention relates to a novel isolated nucleic acid of a G protein-
CC coupled receptor (GPCR) gene comprising any of 62 sequences of 912-2454
CC bp, or its complements; a GPCR polypeptide comprising any of 62 sequences
CC of 291-818 amino acids; or a nucleic acid that hybridises, under high
CC stringency conditions, with any of the 62 GPCR sequences or any of their
CC complements. The GPCR agents of the invention have the following
CC activities: antibacterial, fungicide, protozoacide, virucide,
CC antirheumatic, tranquiliser, antiarthritic, antidiabetic, osteopathic,
CC nootropic, neuroprotective, anorectic, cardiant, neuroleptic, cytostatic,
CC antiparkinsonian, hypotensive, hypertensive, antiulcer, antiallergic,
CC anticonvulsant, and analgesic. The GPCR therapeutic agent, particularly a
CC GPCR gene agonist or antagonist, is useful for treating a disease or
CC condition associated with a GPCR in an individual. The nucleic acid cited
CC above, which is 100 or fewer nucleotides in length, is useful for
CC assaying a sample for the presence of the GPCR gene nucleic acid or a
CC GPCR gene nucleic acid with at least one nucleotide difference from a
CC first nucleic acid, or for diagnosing a susceptibility to a disease or
CC conditions associated with a GPCR. These diseases include infections
CC (e.g. bacterial, fungal, protozoan or viral), rheumatoid arthritis,
CC chronic obstructive pulmonary diseases (COPD), asthma, non-insulin
CC dependent diabetes, obesity, osteoporosis, Alzheimer's disease, age-
CC related macular degeneration, myocardial infarction, schizophrenia,
CC osteoarthritis, cancers, Parkinson's diseases, congestive heart failure,
CC hypotension, hypertension, ulcers, allergies, benign prostatic
CC hyperplasia, seizure disorder, anxiety, obsessive compulsive disorder,
CC Cushing's syndrome, hypopituitarism, or pain. This sequence represents
CC one of the 62 GPCR proteins of the invention.
XX
SQ Sequence 720 AA;

```
  Query Match             62.1%;  Score 707;  DB 7;  Length 720;
  Best Local Similarity   100.0%;  Pred. No. 2.4e-72;
  Matches  137;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         83 FNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAVLVFLTGQEENR 142
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         27 FNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAVLVFLTGQEENR 86

Qy        143 PNFRNSTGAPPAGIVGAGGSFLSVPASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVI 202
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         87 PNFRNSTGAPPAGIVGAGGSFLSVPASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVI 146

Qy        203 ASDKIQSKAVVKRIQHF 219
              |||||||||||||||||
Db        147 ASDKIQSKAVVKRIQHF 163


RESULT 6
ADJ93195
ID   ADJ93195 standard; protein; 940 AA.
XX
AC   ADJ93195;
XX
DT   06-MAY-2004  (first entry)
XX
DE   Fugu extracellular Ca-sensing receptor.
XX
KW   immunosuppressive; cardiant; antiinflammatory; cytostatic; anti-HIV;
KW   antirheumatic; antiarthritic; antibacterial; antiseborrheic;
KW   dermatological; antipsoriatic; neuroprotective; nootropic;
KW   antiparkinsonian; antidiabetic; ophthalmological; antiasthmatic;
KW   antidepressant; neuroleptic; hypotensive; tranquilizer; hypertensive;
KW   anorectic; metabolic; virucide; osteopathic; antianginal; vulnerary;
KW   gene therapy; G-protein coupled receptor protein; HGPRBMY30;
KW   immune disorder; cardiovascular disorder; inflammatory disorder;
KW   metabolic disorder; reproductive disorder; testicular cancer;
KW   neural disorder; endocrine disorder; gastrointestinal disorder;
KW   Alzheimer's disease; Parkinson's diseases; diabetes; dwarfism; asthma;
KW   schizophrenia; obesity; anorexia; osteoporosis; angina pectoris;
KW   myocardial infarction.
XX
OS   Takifugu sp.
XX
PN   WO200296946-A1.
XX
PD   05-DEC-2002.
XX
PF   30-MAY-2002; 2002WO-US017085.
XX
PR   30-MAY-2001; 2001US-0294411P.
XX
PA   (BRIM ) BRISTOL-MYERS SQUIBB CO.
XX
PI   Feder JN,  Mintier GA,  Ramanathan C;
XX
DR   WPI; 2003-140445/13.
XX
PT   Novel human G-protein coupled receptor, HGPRBMY30 polypeptide useful for
PT   preventing and treating e.g. immune disorders, cardiovascular disorders
PT   or inflammatory disorders.
XX
PS   Disclosure; SEQ ID NO 110; 343pp; English.
XX
CC   The invention relates to an isolated human G-protein coupled receptor,
CC   HGPRBMY30 polypeptide or a sequence having 95% identity to the above
CC   mentioned sequences. (I) is useful for preventing or treating a medical
CC   condition, selected from an immune disorder; a cardiovascular disorder;
CC   an inflammatory disorder in which G-protein coupled receptors are either
CC   directly, or indirectly, associated with the disorder; a metabolic
CC   disorder; a reproductive disorder; a male reproductive disorder;
CC   testicular cancer; a neural disorder; an endocrine disorder;
CC   gastrointestinal disorder; (I) and (II) are also useful for detecting,
CC   prognosing, preventing, treating, and/or ameliorating the diseases such
CC   as hematopoietic and pulmonary disorders, Alzheimer's, Parkinson's
CC   diseases, diabetes, dwarfism, color blindness, retinal pigmentosa,
CC   asthma, expression, schizophrenia, sleeplessness, hypertension, anxiety,
CC   stress, renal failure, acute heart failure, hypotension, obesity,
CC   anorexia, HIV infections, osteoporosis, angina pectoris, and myocardial
CC   infarction. (I) and (II) are useful for modulating signal transduction
CC   activity. (I) and (II) are useful as an inhibitor of chemotaxis, as a
CC   food additive or preservative, and for modifying the activities of (I).
CC   (I) and (II) also useful to modulate mammalian characteristics, such as
CC   body height, weight, hair color, eye color, skin, percentage of adipose
CC   tissue, pigmentation, size and shape, to change a mammal's mental state
CC   or physical state by influencing biorhythms, caricadic rhythms,
CC   depression, tendency for violence, tolerance for pain, reproductive
CC   capabilities, hormonal or endocrine levels, appetite, libido, memory,
CC   stress, or other cognitive qualities. This sequence corresponds a protein
CC   having similarity to the novel HGPRBMY30 protein.
XX
SQ   Sequence 940 AA;

  Query Match             31.8%;  Score 362;  DB 7;  Length 940;
  Best Local Similarity   42.8%;  Pred. No. 4.2e-32;
  Matches   74;  Conservative   37;  Mismatches   56;  Indels    6;  Gaps    3;

Qy         53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI 111
              :::||||||       :|::   | | ||  |||: |||::||:  |:|||    :||||
Db         33 ILLGGLFPIHFGISSKDENLAARPESTKCVRFNFRGFRWLQAMVFAIEEINNSSSLLPNI 92

Qy        112 TLGYQIFDTCFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
              ||||:|||||  |:|||::|| | |:   :    |   | | |   ||   :||| || :|
Db         93 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPATIAVVGAAGSAVST 152

Qy        167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
                : :| |:|:||: | |:  :||:| |: |::| | :|: |: |:   |::|
Db        153 AVANLLSLFYIPQISYASSSRLLSNKNQYKSFMRTIPTDEHQATAMADVIEYF 205


RESULT 7
ADI40967
ID   ADI40967 standard; protein; 940 AA.
XX
AC   ADI40967;
XX
DT   22-APR-2004  (first entry)
XX
DE   Fugu calcium sensing receptor.
XX
KW   Receptor; GPCR; G protein-coupled receptor; reproductive disorder;
KW   testicular disorder; vas deferens disorder; spermatogenesis; infertility;
KW   XX male; epididymitis; cryptorchidism; sperm transport disorder;
KW   testicular cancer; testicular germ cell tumour; male hormone disorder;
KW   premature puberty; Kallman syndrome; Cushing's syndrome; immune disorder;
KW   leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis;
KW   inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity;
KW   graft-versus-host disease; autoimmunity disorder;
KW   systemic lupus erythematosus; drug induced haemolytic anaemia;
KW   Sjogren's disease; T-cell maturation disorder;
KW   B-cell maturation disorder; vascular disorder; stroke; ischaemia;
KW   myocardial infarction; atherosclerosis; gastrointestinal disorder; ulcer;
KW   pulmonary disorder; brain disorder; endocrine disorder; cancer;
KW   gene therapy.
XX
OS   Takifugu rubripes.
XX
PN   US2004018976-A1.
XX
PD   29-JAN-2004.
XX
PF   13-MAY-2003; 2003US-00436715.
XX
PR   14-MAY-2002; 2002US-0380336P.
XX
PA   (FEDE/) FEDER J N.
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PA   (MINT/) MINTIER G.
PA   (RAMA/) RAMANATHAN C S.
XX
PI   Feder JN,  Mintier G,  Ramanathan CS;
XX
DR   WPI; 2004-122081/12.
XX
PT   New human G-protein coupled receptor polypeptide and polynucleotide,
PT   useful for diagnosing, preventing, treating or ameliorating a medical
PT   condition, e.g. reproductive disorder, immunodeficiency disease or
PT   testicular cancer.
XX
PS   Disclosure; SEQ ID NO 27; 290pp; English.
XX
CC   The invention relates to an isolated human G protein-coupled receptor
CC   polypeptide and its encoding polynucleotide, including the full length
CC   proteins minus the start methionine (and the region of the polynucleotide
CC   encoding this protein region). The proteins are designated HGPRBMY30-1,
CC   HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY41-3,
CC   HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are
CC   expression vectors, host cells, antibodies, preventing (treating or
CC   ameliorating) a medical condition comprising administering to a mammalian
CC   subject the polypeptide or its modulator and diagnosing a pathological
CC   condition or a susceptibility to a pathological condition in a subject
CC   (comprising determining the presence or absence of a mutation in the
CC   polynucleotide, or the presence or amount of expression of the
CC   polypeptide in a biological sample and diagnosing a pathological
CC   condition or a susceptibility to a pathological condition based on the
CC   presence or absence of the mutation, or the presence or amount of
CC   expression of the polypeptide). The human G-protein coupled receptor
CC   polypeptide or polynucleotide can be used for diagnosing a pathological
CC   condition or a susceptibility to a pathological condition in a subject,
CC   and for preventing, treating or ameliorating a medical condition, such as
CC   a disorder related to aberrant G-protein coupled receptor activity, a
CC   disorder related to aberrant signal transduction, a reproductive disorder
CC   ; a male reproductive disorder, a testicular disorder, a vas deferens
CC   disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male,
CC   epididymitis, genital warts, germinal cell aplasia, cryptorchidism,
CC   varicocele, immotile cilia syndrome, viral orchitis, sperm transport
CC   disorders, testicular cancer, choriocarcinoma, non-seminoma, seminoma,
CC   testicular germ cell tumours, male hormone disorders, premature puberty,
CC   incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune
CC   disorder, a proliferative immune disorder, leukaemia, arthritis, asthma,
CC   immunodeficiency diseases such as AIDS, rheumatoid arthritis,
CC   granulomatous disease, inflammatory bowel disease, sepsis, acne,
CC   neutropenia, neutrophilia, psoriasis, hypersensitivities, such as T-cell
CC   mediated cytotoxicity, immune reactions to transplanted organs and
CC   tissues, such as host-versus-graft and graft-versus-host diseases, or
CC   autoimmunity disorders, such as autoimmune infertility, demyelination,
CC   systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
CC   disease, scleroderma, T-cell maturation disorders, B-cell maturation
CC   disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
CC   atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
CC   irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
CC   endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
CC   related proliferative condition (many other diseases and disorders are
CC   listed in the specification). The antibodies may be used to purify,
CC   detect and target the G-protein coupled receptor polypeptides. The
CC   polynucleotides are also useful in gene therapy. The present sequence
CC   represents a species homologue of a novel GPCR of the invention.
XX
SQ   Sequence 940 AA;

  Query Match             31.8%;  Score 362;  DB 8;  Length 940;
  Best Local Similarity   42.8%;  Pred. No. 4.2e-32;
  Matches   74;  Conservative   37;  Mismatches   56;  Indels    6;  Gaps    3;

Qy         53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI 111
              :::||||||       :|::   | | ||  |||: |||::||:  |:|||    :||||
Db         33 ILLGGLFPIHFGISSKDENLAARPESTKCVRFNFRGFRWLQAMVFAIEEINNSSSLLPNI 92

Qy        112 TLGYQIFDTCFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
              ||||:||||| |:||::|| | |:   :    |  | | |   ||   :||| || :|
Db         93 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPATIAVVGAAGSAVST 152

Qy        167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
                 : :| |:|:||: | |:  :||:| |: |::| | :|: |: |:   |::|
Db        153 AVANLLSLFYIPQISYASSSRLLSNKNQYKSFMRTIPTDEHQATAMADVIEYF 205


RESULT 8
ADI41016
ID   ADI41016 standard; protein; 940 AA.
XX
AC   ADI41016;
XX
DT   22-APR-2004  (first entry)
XX
DE   Fugu calcium sensing receptor #2.
XX
KW   Receptor; GPCR; G protein-coupled receptor; reproductive disorder;
KW   testicular disorder; vas deferens disorder; spermatogenesis; infertility;
KW   XX male; epididymitis; cryptorchidism; sperm transport disorder;
KW   testicular cancer; testicular germ cell tumour; male hormone disorder;
KW   premature puberty; Kallman syndrome; Cushing's syndrome; immune disorder;
KW   leukaemia; arthritis; asthma; AIDS; rheumatoid arthritis;
KW   inflammatory bowel disease; sepsis; T-cell mediated cytotoxicity;
KW   graft-versus-host disease; autoimmunity disorder;
KW   systemic lupus erythematosus; drug induced haemolytic anaemia;
KW   Sjogren's disease; T-cell maturation disorder;
KW   B-cell maturation disorder; vascular disorder; stroke; ischaemia;
KW   myocardial infarction; atherosclerosis; gastrointestinal disorder; ulcer;
KW   pulmonary disorder; brain disorder; endocrine disorder; cancer;
KW   gene therapy.
XX
OS   Takifugu rubripes.
XX
PN   US2004018976-A1.
XX
PD   29-JAN-2004.
XX
PF   13-MAY-2003; 2003US-00436715.
XX
PR   14-MAY-2002; 2002US-0380336P.
XX
PA   (FEDE/) FEDER J N.
PA   (MINT/) MINTIER G.
PA   (RAMA/) RAMANATHAN C S.
XX
PI   Feder JN,  Mintier G,  Ramanathan CS;
XX
DR   WPI; 2004-122081/12.
XX
PT   New human G-protein coupled receptor polypeptide and polynucleotide,
PT   useful for diagnosing, preventing, treating or ameliorating a medical
PT   condition, e.g. reproductive disorder, immunodeficiency disease or
PT   testicular cancer.
XX
PS   Disclosure; SEQ ID NO 76; 290pp; English.
XX
CC   The invention relates to an isolated human G protein-coupled receptor
CC   polypeptide and its encoding polynucleotide, including the full length
CC   proteins minus the start methionine (and the region of the polynucleotide
CC   encoding this protein region). The proteins are designated HGPRBMY30-1,
CC   HGPRBMY30-2, HGPRBMY30-3, HGPRBMY41-1, HGPRBMY41-2, HGPRBMY41-3,
CC   HGPRBMY42, HGPRBMY42-1, HGPRBMY43 and HGPRBMY44. Also included are
CC   expression vectors, host cells, antibodies, preventing (treating or
CC   ameliorating) a medical condition comprising administering to a mammalian
CC   subject the polypeptide or its modulator and diagnosing a pathological
CC   condition or a susceptibility to a pathological condition in a subject
CC   (comprising determining the presence or absence of a mutation in the
CC   polynucleotide, or the presence or amount of expression of the
CC   polypeptide in a biological sample and diagnosing a pathological
CC   condition or a susceptibility to a pathological condition based on the
CC   presence or absence of the mutation, or the presence or amount of
CC   expression of the polypeptide). The human G-protein coupled receptor
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CC   polypeptide or polynucleotide can be used for diagnosing a pathological
CC   condition or a susceptibility to a pathological condition in a subject,
CC   and for preventing, treating or ameliorating a medical condition, such as
CC   a disorder related to aberrant G-protein coupled receptor activity, a
CC   disorder related to aberrant signal transduction, a reproductive disorder
CC   ; a male reproductive disorder, a testicular disorder, a vas deferens
CC   disorder, spermatogenesis, infertility, Klinefelter's syndrome, XX male,
CC   epididymitis, genital warts, germinal cell aplasia, cryptorchidism,
CC   varicocele, immotile cilia syndrome, viral orchitis, sperm transport
CC   disorders, testicular cancer, choriocarcinoma, non-seminoma, seminoma,
CC   testicular germ cell tumours, male hormone disorders, premature puberty,
CC   incomplete puberty, Kallman syndrome, Cushing's syndrome, an immune
CC   disorder, a proliferative immune disorder, leukaemia, arthritis, asthma,
CC   immunodeficiency diseases such as AIDS, rheumatoid arthritis,
CC   granulomatous disease, inflammatory bowel disease, sepsis, acne,
CC   neutropenia, neutrophilia, psoriasis, hypersensitivities, such as T-cell
CC   mediated cytotoxicity, immune reactions to transplanted organs and
CC   tissues, such as host-versus-graft and graft-versus-host diseases, or
CC   autoimmunity disorders, such as autoimmune infertility, demyelination,
CC   systemic lupus erythematosus, drug induced haemolytic anaemia, Sjogren's
CC   disease, scleroderma, T-cell maturation disorders, B-cell maturation
CC   disorders, vascular disorders, stroke, ischaemia, myocardial infarction,
CC   atherosclerosis, embolisms, thrombosis, gastrointestinal disorders,
CC   irritable bowel syndrome, ulcers, pulmonary disorders, brain disorders,
CC   endocrine disorders, or ovarian, stomach, colon or kidney cancer or its
CC   related proliferative condition (many other diseases and disorders are
CC   listed in the specification). The antibodies may be used to purify,
CC   detect and target the G-protein coupled receptor polypeptides. The
CC   polynucleotides are also useful in gene therapy. The present sequence
CC   represents a species homologue of a novel GPCR of the invention.
XX
SQ   Sequence 940 AA;

  Query Match           31.8%;  Score 362;  DB 8;  Length 940;
  Best Local Similarity  42.8%;  Pred. No. 4.2e-32;
  Matches   74;  Conservative   37;  Mismatches   56;  Indels    6;  Gaps    3;

Qy         53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI 111
              :::||||||       :|::   | | ||  |||: |||::||:  |:|||    :||||
Db         33 ILLGGLFPIHFGISSKDENLAARPESTKCVRFNFRGFRWLQAMVFAIEEINNSSSLLPNI 92

Qy        112 TLGYQIFDTCFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
              ||||:|||||  |:||::|| | |:   :    |   | | |   ||   :||| || :|
Db         93 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPATIAVVGAAGSAVST 152

Qy        167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
              : :| |:|:||: | |:  :||:| |: |::| | :|: |: |:   |::|
Db        153 AVANLLSLFYIPQISYASSSRLLSNKNQYKSFMRTIPTDEHQATAMADVIEYF 205


RESULT 9
AAU00508
ID   AAU00508 standard; protein; 1059 AA.
XX
AC   AAU00508;
XX
DT   29-AUG-2001  (first entry)
XX
DE   Chicken calcium-sensitive receptor (CaR) protein.
XX
KW   Avian; chicken; calcium-sensing receptor; CaR; clone C1D;
KW   extracellular calcium homeostasis; parathyroid hormone; PTH;
KW   serum calcium regulator; bone deposition.
XX
OS   Gallus sp.
XX
FH   Key             Location/Qualifiers
FT   Domain          1. .611
FT                   /label= Extracellular_domain
FT                   /note= "Amino-terminal predominantly hydrophilic domain"
FT   Peptide         1. .19
FT                   /label= Signal_peptide
FT   Protein         20. .1059
FT                   /label= Mature_CaR_protein
FT   Region          136. .165
FT                   /note= "Hydrophobic region characteristic of calcium-
FT                   sensing receptors and metabotropic glutamate receptors"
FT   Domain          612. .861
FT                   /note= "Hydrophobic core comprising helical transmembrane
FT                   domains"
FT   Domain          862. .1059
FT                   /note= "Carboxy-terminal hydrophilic domain"
XX
PN   US6210964-B1.
XX
PD   03-APR-2001.
XX
PF   14-AUG-1998;   98US-00134513.
XX
PR   18-AUG-1997;   97US-0058095P.
XX
PA   (BGHM ) BRIGHAM & WOMENS HOSPITAL INC.
XX
PI   Brown EM,  Diaz R,  Bai M,  Quinn SJ;
XX
DR   WPI; 2001-289636/30.
DR   N-PSDB; AAS01709.
XX
PT   New avian calcium-sensing receptor polynucleotide and encoded receptor
PT   protein, useful for regulating serum concentration of calcium animals,
PT   particularly in chickens.
XX
PS   Claim 1; Fig 2A-2D; 43pp; English.
XX
CC   The present sequence representing an avian (chicken) calcium-sensing
CC   receptor (CaR) is isolated from chicken parathyroid gland cDNA clone C1D.
CC   CaR is involved in regulating extracellular calcium homeostasis by
CC   controlling PTH (parathyroid hormone) secretion. The polynucleotide
CC   encoding CaR is useful for producing calcium-sensing receptor protein,
CC   which can be used to regulate extracellular calcium homeostasis and to
CC   regulate serum calcium levels in chickens and related species. By
CC   increasing serum calcium, more rapid growth is obtained due to an
CC   increased rate of bone deposition, and eggs of higher quality are
CC   produced. A DNA construct comprising the CaR polynucleotide is useful for
CC   developing transgenic animals expressing a mutated form of the calcium-
CC   sensing receptor. The CaR polypeptide can be used to produce antibodies
CC   to CaR, which can be used to detect the presence of CaR protein using
CC   immunoassays. Also described are methods and compositions which can be
CC   used to modulate the serum concentration of calcium in humans and animals
XX
SQ   Sequence 1059 AA;

  Query Match           31.4%;  Score 357;  DB 4;  Length 1059;
  Best Local Similarity  37.6%;  Pred. No. 1.9e-31;
  Matches   79;  Conservative   43;  Mismatches   64;  Indels   24;  Gaps    5;

Qy         18 LAFLW--AELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFPIDSRTIPANESI-LE 74
              | | |  |  |   : :|: :           :::||||||      :: :
Db         11 LLFTWNTAAYGPNQRAQKKGD---------------IILGGLFPIHFGVAAKDQDLKSR 54

Qy         75 PASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAVLVF 134
              | | :|  :||: |||::|||  |:|||   ::|||:||||:|||||  |:||::|| | |
Db         55 PESVECIRYNFRGFRWLQAMIFAIEEINNSPNLLPNMTLGYRIFDTCNTVSKALEATLSF 114

Qy        135 LTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSVPASRILGLYYLPQVGYTSTCVIL 189
              :   :    |   | | :   |:   :||| || :|   : :|||:|:||| | |:  :|
Db        115 VAQNKIDSLNLDEFCNCSEHIPSTIAVVGATGSGVSTAVANLLGLFYIPQVSYASSSRLL 174

Qy        190 SDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
              |:| || |:|| | :|: |: |:   |::|
Db        175 SNKNQFKSFLRTIPNDEHQATAMADIIEYF 204


RESULT 10
ADH10927
ID   ADH10927 standard; protein; 850 AA.
```

```
XX
AC   ADH10927;
XX
DT   11-MAR-2004  (first entry)
XX
DE   Atlantic salmon polyvalent cation sensing receptor (PVCR) protein #3.
XX
KW   polyvalent cation sensing receptor; PVCR; Atlantic salmon;
KW   growth increase; mortality reduction.
XX
OS   Salmo salar.
XX
PN   WO2003087331-A2.
XX
PD   23-OCT-2003.
XX
PF   09-APR-2003; 2003WO-US011188.
XX
PR   11-APR-2002; 2002US-00121441.
PR   18-APR-2002; 2002US-00125772.
PR   18-APR-2002; 2002US-00125778.
PR   18-APR-2002; 2002US-00125792.
XX
PA   (MARI-) MARICAL INC.
XX
PI   Harris HW,  Nearing J,  Betka M;
XX
DR   WPI; 2003-845319/78.
DR   N-PSDB; ADH10926.
XX
PT   New Atlantic salmon polyvalent cation-sensing receptor, PVCR,
PT   polypeptides useful in commercial raising of salmon and restoration of
PT   wild Atlantic salmon populations especially in transfer from freshwater
PT   to seawater.
XX
PS   Claim 6; SEQ ID NO 12; 269pp; English.
XX
CC   The invention comprises the amino acid and coding sequences of polyvalent
CC   cation sensing receptor (PVCR) proteins from Atlantic salmon. The DNA and
CC   protein sequences of the invention are useful in the commercial raising
CC   of Atlantic salmon and the restoration of wild Atlantic salmon
CC   populations, especially in the transfer from freshwater to seawater with
CC   increased growth and reduced mortality. The present amino acid sequence
CC   represents an Atlantic salmon PVCR protein of the invention.
XX
SQ   Sequence 850 AA;

  Query Match             31.1%;  Score 354;  DB 7;  Length 850;
  Best Local Similarity   41.6%;  Pred. No. 3.1e-31;
  Matches   72;  Conservative   38;  Mismatches   57;  Indels    6;  Gaps    3;

Qy         53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI 111
              :::|||||:       :: :   | | :|  :||: |||::|||  |:|||    :||||
Db         32 ILLGGLFPMHFGVTSKDQDLAARPESTECVRYNFRGFRWLQAMIFAIEEINNSSTLLPNI 91

Qy        112 TLGYQIFDTCFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
              ||||:|||||  |:||::|| | |:   :    |   | | |   |:   :||| || :|
Db         92 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPSTIAVVGASGSAVST 151

Qy        167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
                : :|||:|:||: | |:  :||:| || |::| | :|: |: |:   | :|
Db        152 AVANLLGLFYIPQISYASSSRLLSNKNQFKSFMRTIPTDEHQATAMADIIDYF 204


RESULT 11
ADH10923
ID   ADH10923 standard; protein; 941 AA.
XX
AC   ADH10923;
XX
DT   11-MAR-2004  (first entry)
XX
DE   Atlantic salmon polyvalent cation sensing receptor (PVCR) protein #1.
XX
KW   polyvalent cation sensing receptor; PVCR; Atlantic salmon;
KW   growth increase; mortality reduction.
XX
OS   Salmo salar.
XX
PN   WO2003087331-A2.
XX
PD   23-OCT-2003.
XX
PF   09-APR-2003; 2003WO-US011188.
XX
PR   11-APR-2002; 2002US-00121441.
PR   18-APR-2002; 2002US-00125772.
PR   18-APR-2002; 2002US-00125778.
PR   18-APR-2002; 2002US-00125792.
XX
PA   (MARI-) MARICAL INC.
XX
PI   Harris HW,  Nearing J,  Betka M;
XX
DR   WPI; 2003-845319/78.
DR   N-PSDB; ADH10922.
XX
PT   New Atlantic salmon polyvalent cation-sensing receptor, PVCR,
PT   polypeptides useful in commercial raising of salmon and restoration of
PT   wild Atlantic salmon populations especially in transfer from freshwater
PT   to seawater.
XX
PS   Claim 6; SEQ ID NO 8; 269pp; English.
XX
CC   The invention comprises the amino acid and coding sequences of polyvalent
CC   cation sensing receptor (PVCR) proteins from Atlantic salmon. The DNA and
CC   protein sequences of the invention are useful in the commercial raising
CC   of Atlantic salmon and the restoration of wild Atlantic salmon
CC   populations, especially in the transfer from freshwater to seawater with
CC   increased growth and reduced mortality. The present amino acid sequence
CC   represents an Atlantic salmon PVCR protein of the invention.
XX
SQ   Sequence 941 AA;

  Query Match             31.1%;  Score 354;  DB 7;  Length 941;
  Best Local Similarity   41.6%;  Pred. No. 3.6e-31;
  Matches   72;  Conservative   38;  Mismatches   57;  Indels    6;  Gaps    3;

Qy         53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI 111
              :::|||||:       :: :   | | :|  :||: |||::|||  |:|||    :||||
Db         32 ILLGGLFPMHFGVTSKDQDLAARPESTECVRYNFRGFRWLQAMIFAIEEINNSSTLLPNI 91

Qy        112 TLGYQIFDTCFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
              ||||:|||||  |:||::|| | |:   :    |   | | |   |:   :||| || :|
Db         92 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPSTIAVVGASGSAVST 151

Qy        167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
                : :|||:|:||: | |:  :||:| || |::| | :|: |: |:   | :|
Db        152 AVANLLGLFYIPQISYASSSRLLSNKNQFKSFMRTIPTDEHQATAMADIIDYF 204


RESULT 12
ADH10925
ID   ADH10925 standard; protein; 941 AA.
XX
AC   ADH10925;
XX
DT   11-MAR-2004  (first entry)
XX
DE   Atlantic salmon polyvalent cation sensing receptor (PVCR) protein #2.
XX
KW   polyvalent cation sensing receptor; PVCR; Atlantic salmon;
KW   growth increase; mortality reduction.
XX
OS   Salmo salar.
XX
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PN WO2003087331-A2.
XX
PD 23-OCT-2003.
XX
PF 09-APR-2003; 2003WO-US011188.
XX
PR 11-APR-2002; 2002US-00121441.
PR 18-APR-2002; 2002US-00125772.
PR 18-APR-2002; 2002US-00125778.
PR 18-APR-2002; 2002US-00125792.
XX
PA (MARI-) MARICAL INC.
XX
PI Harris HW, Nearing J, Betka M;
XX
DR WPI; 2003-845319/78.
DR N-PSDB; ADH10924.
XX
PT New Atlantic salmon polyvalent cation-sensing receptor, PVCR,
PT polypeptides useful in commercial raising of salmon and restoration of
PT wild Atlantic salmon populations especially in transfer from freshwater
PT to seawater.
XX
PS Claim 6; SEQ ID NO 10; 269pp; English.
XX
CC The invention comprises the amino acid and coding sequences of polyvalent
CC cation sensing receptor (PVCR) proteins from Atlantic salmon. The DNA and
CC protein sequences of the invention are useful in the commercial raising
CC of Atlantic salmon and the restoration of wild Atlantic salmon
CC populations, especially in the transfer from freshwater to seawater with
CC increased growth and reduced mortality. The present amino acid sequence
CC represents an Atlantic salmon PVCR protein of the invention.
XX
SQ Sequence 941 AA;

Query Match 31.1%; Score 354; DB 7; Length 941;
Best Local Similarity 41.6%; Pred. No. 3.6e-31;
Matches 72; Conservative 38; Mismatches 57; Indels 6; Gaps 3;

```
Qy         53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI 111
              :::|||||:       :: :   | | :|  :||: |||::|||  |:|||    :||||
Db         32 ILLGGLFPMHFGVTSKDQDLAARPESTECVRYNFRGFRWLQAMIFAIEEINNSSTLLPNI 91

Qy        112 TLGYQIFDTCFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
              ||||:|||||  |:||::|| | |:   :    |   | | |   |:   :||| || :|
Db         92 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPSTIAVVGASGSAVST 151

Qy        167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
                : :|||:|:||: | |:  :||:| || |::| | :|: |: |:    | :|
Db        152 AVANLLGLFYIPQISYASSSRLLSNKNQFKSFMRTIPTDEHQATAMADIIDYF 204
```

RESULT 13
ADH10929
ID ADH10929 standard; protein; 941 AA.
XX
AC ADH10929;
XX
DT 11-MAR-2004 (first entry)
XX
DE Atlantic salmon polyvalent cation sensing receptor (PVCR) protein #4.
XX
KW polyvalent cation sensing receptor; PVCR; Atlantic salmon;
KW growth increase; mortality reduction.
XX
OS Salmo salar.
XX
PN WO2003087331-A2.
XX
PD 23-OCT-2003.
XX
PF 09-APR-2003; 2003WO-US011188.
XX
PR 11-APR-2002; 2002US-00121441.
PR 18-APR-2002; 2002US-00125772.
PR 18-APR-2002; 2002US-00125778.
PR 18-APR-2002; 2002US-00125792.
XX
PA (MARI-) MARICAL INC.
XX
PI Harris HW, Nearing J, Betka M;
XX
DR WPI; 2003-845319/78.
DR N-PSDB; ADH10928.
XX
PT New Atlantic salmon polyvalent cation-sensing receptor, PVCR,
PT polypeptides useful in commercial raising of salmon and restoration of
PT wild Atlantic salmon populations especially in transfer from freshwater
PT to seawater.
XX
PS Claim 6; SEQ ID NO 14; 269pp; English.
XX
CC The invention comprises the amino acid and coding sequences of polyvalent
CC cation sensing receptor (PVCR) proteins from Atlantic salmon. The DNA and
CC protein sequences of the invention are useful in the commercial raising
CC of Atlantic salmon and the restoration of wild Atlantic salmon
CC populations, especially in the transfer from freshwater to seawater with
CC increased growth and reduced mortality. The present amino acid sequence
CC represents an Atlantic salmon PVCR protein of the invention.
XX
SQ Sequence 941 AA;

Query Match 31.1%; Score 354; DB 7; Length 941;
Best Local Similarity 41.6%; Pred. No. 3.6e-31;
Matches 72; Conservative 38; Mismatches 57; Indels 6; Gaps 3;

```
Qy         53 LVIGGLFPIDSRTIPANESI-LEPASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNI 111
              :::|||||:       :: :   | | :|  :||: |||::|||  |:|||    :||||
Db         32 ILLGGLFPMHFGVTSKDQDLAARPESTECVRYNFRGFRWLQAMIFAIEEINNSSTLLPNI 91

Qy        112 TLGYQIFDTCFTISKSVEAVLVFLTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSV 166
              ||||:|||||  |:||::|| | |:   :    |   | | |   |:   :||| || :|
Db         92 TLGYRIFDTCNTVSKALEATLSFVAQNKIDSLNLDEFCNCTDHIPSTIAVVGASGSAVST 151

Qy        167 PASRILGLYYLPQVGYTSTCVILSDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
                : :|||:|:||: | |:  :||:| || |::| | :|: |: |:    | :|
Db        152 AVANLLGLFYIPQISYASSSRLLSNKNQFKSFMRTIPTDEHQATAMADIIDYF 204
```

RESULT 14
AAY49105
ID AAY49105 standard; protein; 612 AA.
XX
AC AAY49105;
XX
DT 07-JAN-2000 (first entry)
XX
DE Human CaR extracellular domain.
XX
KW G-protein fusion receptor; CaR; calcium receptor; GluR; head injury;
KW metabotropic glutamate receptor; GABABR; chimeric receptor; stroke;
KW gamma-aminobutyric acid receptor; allosteric modulator; antagonist;
KW spinal cord injury; epilepsy; ischaemia; hypoglycaemia; anoxia;
KW Alzheimer's disease; hyperparathyroidism; osteoporosis; depression;
KW cognitive disorder.
XX
OS Homo sapiens.
XX
PN WO9951641-A1.
XX
PD 14-OCT-1999.
XX
PF 02-APR-1999; 99WO-US007333.
XX
PR 03-APR-1998; 98US-0080671P.
XX

```
PA   (NPSP-) NPS PHARM INC.
XX
PI   Stormann TM,  Hammerland LG,  Storjohann LL,  Busby JG,  Garrett JE;
PI   Simin RT;
XX
DR   WPI; 1999-610995/52.
DR   N-PSDB; AAZ31049.
XX
PT   New G-protein fusion receptors and chimeras containing domains from
PT   different receptors, used to screen for modulators, potentially useful
PT   e.g. for treating or preventing stroke or Alzheimer's disease.
XX
PS   Claim 13; Fig 1; 255pp; English.
XX
CC   The invention relates to G-protein fusion receptors (I) comprising: (1)
CC   in the N to C direction, extracellular (ECD), transmembrane (TMD) and
CC   intracellular (ICD) domains, each chosen independently from a CaR
CC   (calcium receptor), GluR (metabotropic glutamate receptor) and GABABR
CC   (gamma-aminobutyric acid receptor); (2) an optional linker attached to
CC   the C-terminus of ICD; and (3) a G-protein (GP) linked to ICD or the
CC   linker. (I), and recombinant chimeric receptors (CR) without the GP
CC   component, are used to assess function of the various domains and to
CC   identify compounds (e.g. allosteric modulators or antagonists) that act
CC   on these domains. The modulators are potentially useful for treating or
CC   preventing diseases associated with the receptors, e.g. stroke, head or
CC   spinal cord injury, epilepsy, ischaemia, hypoglycaemia, anoxia,
CC   Alzheimer's disease, hyperparathyroidism, osteoporosis, cognitive
CC   disorders and depression. Nucleic acid (II) that encodes (I) is used: (1)
CC   for recombinant production of corresponding proteins; and (2) to produce
CC   cells used in screening for modulators. Use of CaR and mGluR domains
CC   allows presentation of GABABR domains, to a binding agent, in a form more
CC   like the natural domain structure compared with use of incomplete
CC   receptors, lacking one or more domains. By shuffling different domains,
CC   agents can be identified that affect particular domains of a receptor
XX
SQ   Sequence 612 AA;

  Query Match             31.0%;  Score 353;  DB 2;  Length 612;
  Best Local Similarity   37.1%;  Pred. No. 2.5e-31;
  Matches   78;  Conservative   44;  Mismatches   64;  Indels   24;  Gaps    5;

Qy         18 LAFLW--AELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFPIDSRTIPANESI-LE 74
              ||  |  :  | : : :|: :                :::||||||       :: :
Db         11 LALTWHTSAYGPDQRAQKKGD---------------IILGGLFPIHFGVAAKDQDLKSR 54

Qy         75 PASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAVLVF 134
              | | :|  :||: |||::|||  |:|||    :|||:||||:|||||  |:||::|| | |
Db         55 PESVECIRYNFRGFRWLQAMIFAIEEINSSPALLPNLTLGYRIFDTCNTVSKALEATLSF 114

Qy        135 LTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSVPASRILGLYYLPQVGYTSTCVIL 189
              :   :    |   | | :   |:   :||| || :|   : :|||:|:||| | |:  :|
Db        115 VAQNKIDSLNLDEFCNCSEHIPSTIAVVGATGSGVSTAVANLLGLFYIPQVSYASSSRLL 174

Qy        190 SDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
              |:| || |:|| | :|: |: |:   |::|
Db        175 SNKNQFKSFLRTIPNDEHQATAMADIIEYF 204


RESULT 15
AAO15072
ID   AAO15072 standard; protein; 612 AA.
XX
AC   AAO15072;
XX
DT   22-AUG-2002  (first entry)
XX
DE   Human CaR extracellular domain.
XX
KW   Human; G-protein fusion receptor; extracellular domain;
KW   transmembrane domain; intracellular domain; CaR; mGluR; GABABR;
KW   modulator identification.
XX
OS   Homo sapiens.
XX
PN   WO200229033-A2.
XX
PD   11-APR-2002.
XX
PF   03-OCT-2001; 2001WO-US031074.
XX
PR   03-OCT-2000; 2000US-00679664.
XX
PA   (NPSP-) NPS PHARM INC.
XX
PI   Stormann T,  Hammerland LG,  Storjohann LL,  Busby JG,  Garrett JE;
PI   Simin RT;
XX
DR   WPI; 2002-330170/36.
XX
PT   Novel G-protein fusion receptor, useful for identifying modulators of
PT   CaR, mGluR and GABABR, comprises G-protein joined to the intracellular
PT   domain of the receptor.
XX
PS   Claim 18; Fig 1; 168pp; English.
XX
CC   The invention comprises G-protein fusion receptors - comprising
CC   extracellular, transmembrane and intracellular domains similar to CaR,
CC   mGluR or GABAB receptor sequences. The G-protein fusion receptors of the
CC   invention may also possess a linker joined to the carboxy terminus of the
CC   intracellular domain, and a G-protein joined to the linker. The G-protein
CC   fusion receptors of the invention are useful for identifying modulators
CC   of CaR, mGluR and GABABR for use in treating associated conditions. The
CC   present amino acid sequence was used in the production of the invention
XX
SQ   Sequence 612 AA;

  Query Match             31.0%;  Score 353;  DB 5;  Length 612;
  Best Local Similarity   37.1%;  Pred. No. 2.5e-31;
  Matches   78;  Conservative   44;  Mismatches   64;  Indels   24;  Gaps    5;

Qy         18 LAFLW--AELGSEAKEEKEEERTCRLLGKCVDAENHSLVIGGLFPIDSRTIPANESI-LE 74
              ||  |  :  | : : :|: :                :::||||||       :: :
Db         11 LALTWHTSAYGPDQRAQKKGD---------------IILGGLFPIHFGVAAKDQDLKSR 54

Qy         75 PASAKCEGFNFQRFRWMKAMIHMIKEINKRKDILPNITLGYQIFDTCFTISKSVEAVLVF 134
              | | :|  :||: |||::|||  |:|||    :|||:||||:|||||  |:||::|| | |
Db         55 PESVECIRYNFRGFRWLQAMIFAIEEINSSPALLPNLTLGYRIFDTCNTVSKALEATLSF 114

Qy        135 LTGQE---ENRPNFRNSTGAFPA--GIVGAGGSFLSVPASRILGLYYLPQVGYTSTCVIL 189
              :   :    |   | | :   |:   :||| || :|   : :|||:|:||| | |:  :|
Db        115 VAQNKIDSLNLDEFCNCSEHIPSTIAVVGATGSGVSTAVANLLGLFYIPQVSYASSSRLL 174

Qy        190 SDKYQFPSYLRVIASDKIQSKAVVKRIQHF 219
              |:| || |:|| | :|: |: |:   |::|
Db        175 SNKNQFKSFLRTIPNDEHQATAMADIIEYF 204


Search completed: February 16, 2005, 16:32:00
Job time : 45.0491 secs
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